JOINT PATIENT TRACKING APPLICATION/VETERANS TRACKING APPLICATION: A JOINT PLATFORM FOR INTERDEPARTMENTAL DATA EXCHANGE

BY

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14. ABSTRACT

Wounded warriors from Operation's Enduring Freedom and Iraqi Freedom move rapidly thru multiple military medical treatment facilities (MTFs) on the battlefield, in Europe, and the United States generating a significant amount of clinical data, both electronic and on paper at each point along the way. The lack of a universal inpatient electronic medical record capability in the Department of Defense (DoD) makes it difficult to share clinical information within the DoD and, limited interoperability with Department of Veterans Affairs electronic medical record system prevents much of this critical data (often on the most seriously injured service members) from ever making it to the Department of Veterans Affairs. The one constant in the complex maze of systems and applications used to document health care is the Joint Patient Tracking Application (JPTA); it's the sole universal application in place at every point along the way. JPTA is the optimal platform for real time sharing of clinical data not only within the DOD but also to the Department of Veterans Affairs (DVA) thru an interface with the Veterans Tracking Application (VTA). Many Service members remain on active duty while receiving care at Veterans Health Care facilities; others make their way into VA hospitals as they make the transition from active duty to veteran status. This results in the need to share electronic health information between DoD and VA hospitals to facilitate the best possible care. There is no common platform for sharing inpatient electronic health care information between the DoD and the VA as a result, electronic medical history data is not available on many of our most severely injured service members and veterans when they arrive at VA facilities. The most advantageous strategy for expansion of data sharing between DoD and VA is thru expansion of the JPTA / VTA platform. Extending the reach of JPTA to capture all data of interest to the VA from every DoD health care information system as well as modifying JPTA to provide additional functionality for DoD users could quickly fill the large gap that results from the DoDs lack of an electronic inpatient medical record..

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ABSTRACT

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The one constant in the complex maze of systems and applications used to document health care is the Joint Patient Tracking Application (JPTA); it's the sole universal application in place at every point along the way. JPTA is the optimal platform for real time sharing of clinical data not only within the DOD but also to the Department of Veterans Affairs (DVA) thru an interface with the Veterans Tracking Application (VTA). Many Service members remain on active duty while receiving care at Veterans Health Care facilities; others make their way into VA hospitals as they make the transition from active duty to veteran status. This results in the need to share electronic health information between DoD and VA hospitals to facilitate the best possible care. There is no common platform for sharing inpatient electronic health care information between the DoD and the VA as a result, electronic medical history data is not available on many of our most severely injured service members and veterans when they arrive at VA facilities.

The most advantageous strategy for expansion of data sharing between DoD and VA is thru expansion of the JPTA / VTA platform. Extending the reach of JPTA to capture all data of interest to the VA from every DoD health care information system as well as modifying JPTA to

provide additional functionality for DoD users could quickly fill the large gap that results from the DoDs lack of an electronic inpatient medical record.

JOINT PATIENT TRACKING APPLICATION/VETERANS TRACKING APPLICATION:
A JOINT PLATFOM FOR INTERDEPARTMENTAL DATA EXCHANGE

Wounded warriors from Operation's Enduring Freedom and Iraqi Freedom move rapidly thru multiple military medical treatment facilities (MTFs) on the battlefield, in Europe, and the United States generating a significant amount of clinical data, both electronic and on paper at each point along the way. The lack of a universal inpatient electronic medical record capability in the Department of Defense (DoD) makes it difficult to share clinical information within the DoD and limited interoperability with Department of Veterans Affairs electronic medical record system prevents much of this critical data (often on the most seriously injured service members) from ever making it to the Department of Veterans Affairs. The obvious impact is an increased level of difficulty in providing health care without a complete patient history; however, increased data sharing between VA and DoD also lessens the burden on the veteran for providing requested information and reduces the time necessary for VA decisions enabling the veteran to receive benefits and services. (1)

When a Soldier, Sailor, Airmen or Marine arrives at a medical treatment facility in the United States Central Command Area of Operations, life saving treatment along with the difficult task of documenting their medical care begins. Data collection starts with first responders but this paper will focus on care provided at higher level facilities that offer life saving surgical capability including Marine Corps Field Hospitals, Army Combat Support Hospitals, and Air Force and Navy Expeditionary Medical Facilities. Outpatient documentation occurs primarily in two separate systems, the Composite Health Care System II Theater (CHCS IIT) and the Global Expeditionary Medical System(GEMS), this includes seriously injured patients that, in most cases, are considered outpatients during their initial treatment in the hospitals emergency room prior to their admission as an inpatient. Inpatients notes are entered universally in the Joint Patient Tracking Application (JPTA). Ancillary services such as laboratory, pharmacy and radiology are requested and resulted in yet another system, the Composite Health Care System (CHCS). While radiology results can be recorded in CHCS, the actual images are maintained on local work stations and viewed using a system called Medweb (2) but generally are not available at other facilities due to bandwidth constraints. Paper records are also initiated on all patients as well as a record in the Joint Theater Trauma Registry (JTTR)

(available online in JPTA). Finally, to request movement for patients that require further evacuation, a patient movement request is initiated in the US Transportation Command Regulating and Command & Control Evacuation System (TRAC2ES) and an Aero Medical Evacuation Patient Record (on paper) is also completed (this can however, be filled out electronically in JPTA). Hospital staff members are also responsible for providing a myriad of daily reports to command and control elements. CHCS, CHCS IIT, Medweb and GEMS require local servers, local maintenance and support. JPTA and TRAC2ES are web based and maintained centrally by remote development teams. Both applications also have offline capability.

The documentation process continues at the Regional Medical Center in Landstuhl, Germany with an update to the existing JPTA record, a local registration in the Composite Health Care System (this system does not communicate with CHCS NT servers located in the US CENTCOM Theater of Operations) and the creation of a paper record. Landstuhl also uses a Microsoft Share Point Portal Server to collaborate on an electronic version of the summary of care provided that is eventually attached to the JPTA record. Further medical evacuation requires another patient movement request in TRAC2ES.

The next stop in the evacuation route is often Walter Reed Army Medical Center in Washington, DC. Here, the existing JPTA record is updated, a CHCS record is created (some of the CHCS data collected at Landstuhl, specifically ancillary services data, is available to CHCS users at Walter Reed) and a new record is created in yet another system, Clinical Information System (CIS), developed by San Diego based CliniComp. CIS is currently operating in 11 Department of Defense Hospitals (3) with each location maintaining separate servers and data. As result of the disparate servers, Brooke Army Medical Center for example, can't easily view the data from Bethesda, National Naval Medical Center, when a patient transfers from there.

By Presidential Directive, the Defense Medical Information Management and Information Technology Program was established in 1994 to manage health information and the supporting technology with a goal of providing the right information to the right people at the right time across the entire continuum of health care:

- Tracking of Patients. During the Gulf War (and during the initial phases of OEF and OIF), information regarding the admission and diagnosis of patients at the

deployed medical units in the theater of operations was not timely or complete. In addition, patients could not be adequately tracked within the medical evacuation process or at field facilities.

- Capture and Transfer of Information Needed by the Office of the Assistant Secretary of Defense for Health Affairs [OASD (HA)], other DoD, or Federal Agencies. Existing health processes or systems do not adequately capture information needed by other organizations such as the Under Secretary of Defense (Personnel and Readiness) [USD (P&R)] VA, or FDA. Health information is needed by these other agencies to determine disability and VA health care entitlements and to meet FDA reporting requirements for investigational new drugs. In addition, information contained in systems managed by these agencies is not always available to support health care delivery. (4)

The one constant in this complex maze of systems and applications is the Joint Patient Tracking Application; it's the sole universal application in place at every point along the way. In addition to the clinical information entered directly in JPTA, feeds from nearly all theater and CONUS based medical information systems were implemented to populate records in JPTA establishing it as the clinical data repository for patients from the Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) Theaters of Operation (CIS and Medweb are exceptions but documents and images from both are routinely attached to JPTA). As a result, JPTA is the optimal platform for real time sharing of clinical data not only within the DoD but also to the Department of Veterans Affairs (VA).

JOINT PATIENT TRACKING APPLICATION

Used by all services to track patients from Iraq, Afghanistan, Horn of Africa, Pakistan, Kuwait, Qatar to military hospitals in Germany, the United States and some Veteran's Affairs Hospitals
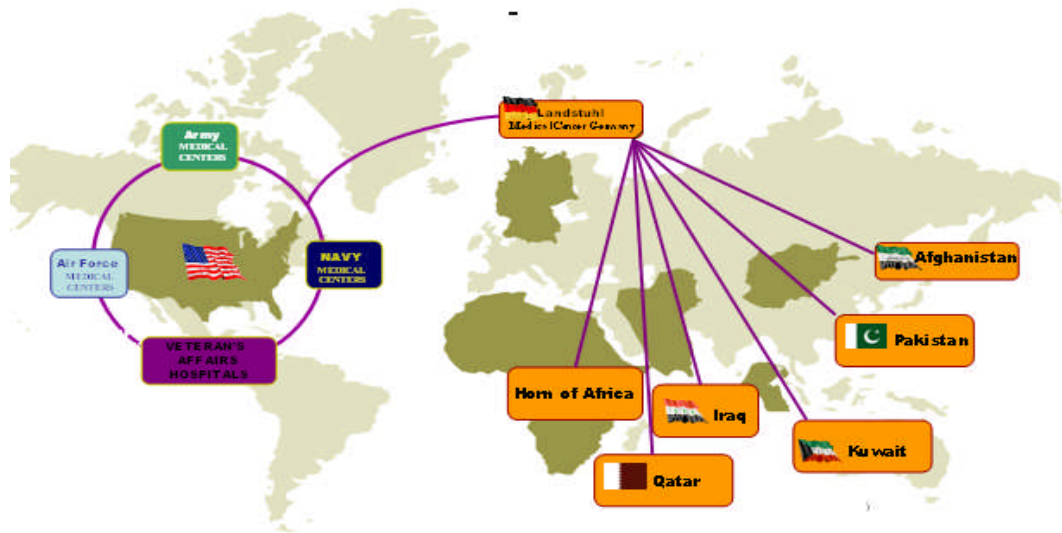
Tracking patients through the Continuum of Care

     The Joint Patient Tracking Application (JPTA) was developed at Landstuhl Regional Medical Center (LRMC) and fielded Jan 1st 2004 to manage the overwhelming flow of patients arriving daily at the Deployed Warrior Medical Management Center from Operations Iraqi Freedom and Enduring Freedom. Secure and Web based, JPTA tracks the status and location of wounded warriors as they move from the battlefield through Department of Defense (DOD) hospitals in Europe and the United States, providing visibility across the full spectrum of care offered by the Military Health System. Quickly adopted as the gold standard for patient tracking, the Assistant Secretary of Defense for health affairs (ASD,HA) directed its use in all United States based military hospitals with a focus on those facilities receiving high numbers of casualties evacuated from the theater of operations. A few months later, United States Central Command (US CENTCOM), Commanding General, John Abizaid, directed JPTA fielding to all US Military hospitals deployed in support of Operations Iraqi Freedom and Enduring Freedom. Initially designed to provide visibility and status of ill and injured patients on the battlefield, JPTA quickly transitioned into a platform for capturing clinical data and sharing it in real time. On today's battlefield, the medical evacuation system rapidly moves patients from theater based hospitals to more specialized medical centers in Germany and the United States. In one instance,

a soldier injured in Iraq made it to the operating room in Landstuhl Germany in less than 12 hours. When patients are moving this quickly, real time data sharing is the only acceptable solution. Using JPTA, doctors can view the care provided to the most severely injured service members regardless of their location or the location of the patient.

- "The impact at the lowest level is that a mother, father, brother, sister, husband, or wife can know almost immediately the status of their sick or injured Soldier....that contribution is immeasurable!"

John W. Knight III
CPT, SP, PA-C
Division Surgeon (Rear)
101st Airborne Division (AASLT)

While the cornerstone of JPTA is its real time patient search capability enabling authorized users worldwide to locate a patient in seconds, simultaneous phases of rapid application development to meet the needs of diverse groups of users at multiple locations quickly transitioned JPTA into a complex information collection and sharing platform that gained unprecedented buy in and support from all levels.

The Regional Medical Center at Landstuhl, Germany was the initial proving ground for JPTA. Serving as the center point in the hourglass for Aeromedical Evacuation from the OEF and OIF theaters, with hundreds of patients arriving every few days, and an evacuation policy of seven days, The DOD Medical Center at Landstuhl was a very busy place. Fielded to LRMC on 1 January 2004 in an effort to prevent patients from falling thru the cracks, JPTA provided the tools to keep track of a patient during their typically brief stay in Landstuhl. Designed to document a patient's location and provide various day to day reports for all OEF and OIF patients (in- and out-patient rosters, new patients, patients by service and by unit, ward and room number), JPTA eventually transitioned into a complete management application streamlining most of the administrative processes associated with this patient population. Leaders quickly realized the potential of expanding the capabilities of JPTA and leveraging it in other areas of the medical center as well as to users in the theater of operations, and at the hospitals in the United States. One of the more ambitious initiatives was to develop an interface between JPTA and the Composite Health Care System (CHCS), the Department of Defense version of an electronic medical record (recently renamed ALHTA or Armed Forces Health Longitudinal Technology

Application). The goal was to provide CHCS with demographic information on all patients that were registered in JPTA; in exchange, CHCS would provide medical data such as diagnosis, treatment, medications, appointments, healthcare providers and treating health care facilities. Developed over a six month period, this interface helped bridge the gap between data collected in combat support hospitals on the battlefield and brick and mortar facilities in Europe and the US. Even if a hospital wasn't using JPTA yet, the CHCS data collected there was still transferred to JPTA every 24 hours, providing clinical information and the location of the patient. Additionally, JPTA was interfaced with most other systems in use on the battlefield for the collection of health care data (stand alone digital radiography systems were the exception).

Previously a paper only form, the Air Force Aero Medical Evacuation Patient Record, also known as the AF Form 3899, served as the record of treatment for patients during the fixed wing evacuation process from one hospital to another. This record is initiated at the losing facility prior to the evacuation of the patient and is sent on the aircraft with the patient. An electronic version of the AF Form 3899 was built in JPTA, incorporating existing data and allowing providers to open the form in JPTA with much of the data pre-populated. Often started by a provider on one of the hospitals wards, the form could be moved electronically in JPTA to the Air Evacuation section and other hospital departments that needed to view or modify it before the patient's departure. In order to facilitate the large number of OEF and OIF patients that arrived and departed LRMC on a daily basis, a streamlined process for the order and delivery of medication was necessary that was tied to the JPTA version of the AF Form 3899. This need resulted in the development of a pharmacy module that was driven by patients on a pending departure list with an active electronic 3899. Selecting a patient from this list opened a pharmacy window that allowed doctors to prescribe the medications needed for the next leg of the patient's journey. Connected to the hospital's formulary, medications could be searched by name, selected and then prescribed. Many providers set up templates for certain kinds of patients making the prescription process as simple as a few mouse clicks.

AF3899 Medication Sets

Set Name	Medications

Add New Medication Set

MEDICATION SET NAME: Patient Type 1

SEARCH MEDICATIONS: IBUPROFEN [?]

Amount	Interval	# of Days	Medication/Dosage	Max # Dispensed	
1 ▾	2X DAILY ▾	3 ▾	IBUPROFEN--PO 800MG TAB ▾	6	Add To Medication Notes

Medication Notes:

```
IBUPROFEN--PO 800MG TAB
- SIG: 1 2X DAILY FOR 3
DAYS (MAX QTY
DISPENSED: )
```

[Save Medication Set] [Cancel]

Joint Patient Tracking Application

Patient Registration   Patient Search   Patient Info.   Reports   Patients By Service   Guidelines/Info.   Help   Logout

Pending Departures

DIAGNOSIS	ARR. DATE	STATUS	OP	LOCATION	DISPOSITION	STATUS DATE	ASSIGNED BY	AF3899	Destination Facility
BURKITT'S TUMOR OR LYMPHOMA, INTRATHORACIC LYMPH NODES	02/22/07	OUTPATIENT	OIF	LRMC - RAMSTEIN INN 12c	PENDING TRANSFER	04/25/07		View Finalize	201st EVAC HOSP (TOE)
TRAUMATIC AMPUTATION, LEG(S), BILATERAL (ANY LEVEL) , WITHOUT MENTION OF COMPLICATION	02/15/07	DISCH-OP	OIF		PENDING TRANSFER	02/20/07		Create	
BURN OF 90 PERCENT OR MORE OF BODY SURFACE WITH THIRD DEGREE BURN OF 30-39%	04/30/07	INPATIENT	OIF	PENDING	PENDING TRANSFER	04/19/07		Create	
BURN OF UNSPECIFIED DEGREE OF FOREHEAD AND CHEEK	02/18/07	INPATIENT	OIF		PENDING TRANSFER	02/20/07		Create	
ABDOMINAL OR PELVIC SWELLING, MASS, OR LUMP,UNSPECIFIED SITE	02/19/07	OUTPATIENT	OIF		PENDING TRANSFER	02/20/07		Create	
RASH AND OTHER NONSPECIFIC SKIN ERUPTION	02/06/07	INPATIENT	OIF		PENDING RTD	02/20/07		Create	
FRACTURE OF VAULT OF SKULL, CLOSED WITH CEREBRAL LACERATION AND CONTUSION, WITH NO LOSS OF CONSCIOUSNESS	12/20/06	ADMIT	OEF	7D Suite 3	PENDING TRANSFER	04/19/07		View Finalize	21st CSH - Abu Ghraib
FRACTURE OF VAULT OF SKULL, CLOSED WITH CEREBRAL LACERATION AND CONTUSION, WITH NO LOSS OF CONSCIOUSNESS	12/20/06	INPATIENT	OEF		PENDING TRANSFER	04/19/07		View Finalize	21st CSH - Abu Ghraib

The most pivotal development effort took place in March, 2005 at the Air Force Theater Hospital in Balad, Iraq. This undertaking marked the beginning of JPTA's transition from a patient tracking tool to a universal platform for real time sharing of critical clinical information. Sponsored by the US Central Command Surgeon, hospital personnel in Balad were trained on JPTA and asked to provide input on ways to make this tool work for them. Highly skilled

surgeons in Balad that routinely spent more than 14 hours a day in the operating room needed the ability to write clinical notes.   At the time, patient notes in Balad were being documented in a series of spreadsheets, arranged by date and stored on the shared drive of a small hospital server. The goal was to quickly deliver a streamlined version of this process in JPTA. Over the next few weeks clinicians at the hospital provided the necessary feedback to a small but highly skilled development team that quickly translated them into new capability. This process continued until clinicians at the hospital were satisfied. Driven primarily by hospital surgeons, they wanted to be able to write and save cumulative notes on one or all of their patients in a responsive and easy to use interface that was driven by the hospital's patient roster. Operative notes and clinical narratives in JPTA have become essential elements of the patient's record. A great deal of clinical information continued to be generated on paper or in stand alone systems resulting in a requirement to attach key files to the patient record in JPTA.   This problem didn't surface in Balad but the clinicians there wanted to fix it. The solution was an easy to use capability that allowed users to browse for a file (images, ct scans, trauma records, etc., up to 20 Megabytes) from a patient's history record in JPTA and upload it as an attachment to that record; anyone viewing the record would then have access to the attached file. The implementation of these two initiatives marked the beginning of real time communication of highly relevant clinical data between military hospitals on the battlefield, in Europe and the US.

| AUTHOR	DATE	NOTES	FACILITY
	7/29/2006 3:11:57 PM	US casualty injured by mortar fire. Arrived in EMT with GCS 15. BP and respiratory rate stable. See JTTR. Rapid sequence intubation, and exam showing single soft tissue wound in right chest below nipple mid clav line. Soft abdomen. Clear lungs. Fast negative. pulses present all extremty. no back wound. face/head/ neck were normal. CXR shows frag below diaphragm no ptx no hemothorax. CT shows parenchymal liver injury with likely diaphragm injury as well. Taken to OR for expl. laparotomy.	10th CSH - N. Baghdad
	7/31/2006 1:58:52 AM	Pt is a 36yo male soldier admitted to LRMC ICU 30Jul06 for Mortar Attack. Provider is Dr. Woods. Status is SI. Pt on vent, reintubated with larger ET tube. Bronched- lots of "gunk in the trunk". Foreign body in liver. Ex-lap done. Right chest tube. Fentanyl/Versed drips. BP sensitive to Propofol. Responds to pain, pupils 2S. Febrile- T-max 39.1, Motrin given. Lytes replaced. New A-line. PLAN: New central line. Discharge plan pending. - PENDING TRANSFER	LRMC
	8/1/2006 2:00:20 AM	Pt is a 36yo male soldier who remains on ICU for Mortar Attack. Provider is Dr. Woods. Status is SI. Pt on vent. Bronched-cultures sent. Foreign body in liver. Ex-lap done. Right chest tube. Fentanyl/Versed drips. BP sensitive to Propofol. Responds to pain. Gram + Cocci in blood, started on Vanco and Imipenem. New CVC. Echo done yesterday- negative. Staying on vent for flight. Pt name on manifest for A/E to WALTER REED AMC, WASH DC 01Aug06. - PENDING TRANSFER	LRMC
	8/3/2006 2:03:28 PM	Vs stable this AM. chest tube in place with serosanguinous drainage. Urine output adequate via foley catheter. Plan for transfer to stepdown unit today.	WRAMC
	8/5/2006 7:24:01 AM	This patient's care was discussed in the JTTS follow-up teleconference on 3 Aug 2006. Members participating in the conference represented forward deployed surgeons at the CSH's as well as those at LRMC, WRAMC, Bethesda National Naval Medical Center and the Army Burn Unit in San Antonio. The patient's presentation, injuries and hospital course were discussed from the perspective of each echelon of care and conflicting information resolved.	10th CSH - N. Baghdad
	8/7/2006 2:13:07 PM	HD6-PT LYING ON HIS LEFT SIDE, DENIES PAIN AT THIS TIME. HAS SKIN TEAR/LACERATION TO THE CHIN. HAS RIGHT CHEST TUBE IN PLACE TO BE AT 20CM OF H20 SEAL. HAS BULKY DRSG TO THE RIGHT UPPER CHEST, WHICH IS DRY AND INTACT. ABDOMINAL MIDLINE INCISION W/ STAPLES AND OTA. NO DRAINAGE FROM OR SIGNS OF INFECTION NOTED. PT TOLERATING A REGULAR DIET VERY WELL. WIFE AT THE BEDSIDE. PT AMBULATES TO THE BATHOM.	WRAMC

The Naval Field Hospital in Kuwait was another site of significant development of JPTA to support the deployed environment. Instead of creating reports using Microsoft Excel, Power Point or Word, reports would become paperless, driven by the patient registration process and delivered to authorized users dynamically, in real time, eliminating the need to manually prepare reports and then email them to multiple recipients. During this period, several reports were developed. Reports that previously took several hours could be generated automatically by making the certain fields mandatory on the registration page, and ensuring every patient that arrived at the hospital was registered in JPTA. The Top 10 and Top 20 Diagnoses reports were developed initially and were used by medical planners help determine where valuable medical resources should be placed in the theater of operations. There was a similar need to develop reports that graphically represented the patient population by month over a selected period of time. Also driven by data collected during the registration process, the hospital staff wanted to see the number of patients that were treated during their deployment (four months for the Air Force, six months for the Navy, and one year for the Army). Most fields on the registration screen are tied to the verification of the patient's unique Social Security Number, and that verification returned several related demographic fields (name, rank, age, service, service

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component, and others); representing the patient population graphically was a relatively easy task.   Once JPTA became the reporting tool for the hospital and its higher headquarters, the leadership buy in increased significantly. The hospitals Patient Administration Division, generally charged with patient registration, also bought in because the SSN verification process eliminated the need for them to manually enter many of the other standard registration fields and resulted in a reduction of the error rate associated with manual data entry. As with other user driven modifications to JPTA that created buy in, the accuracy of the data in JPTA continued to increase as a result.

Top 20 Initial Diagnoses - ALL - Injury:BI
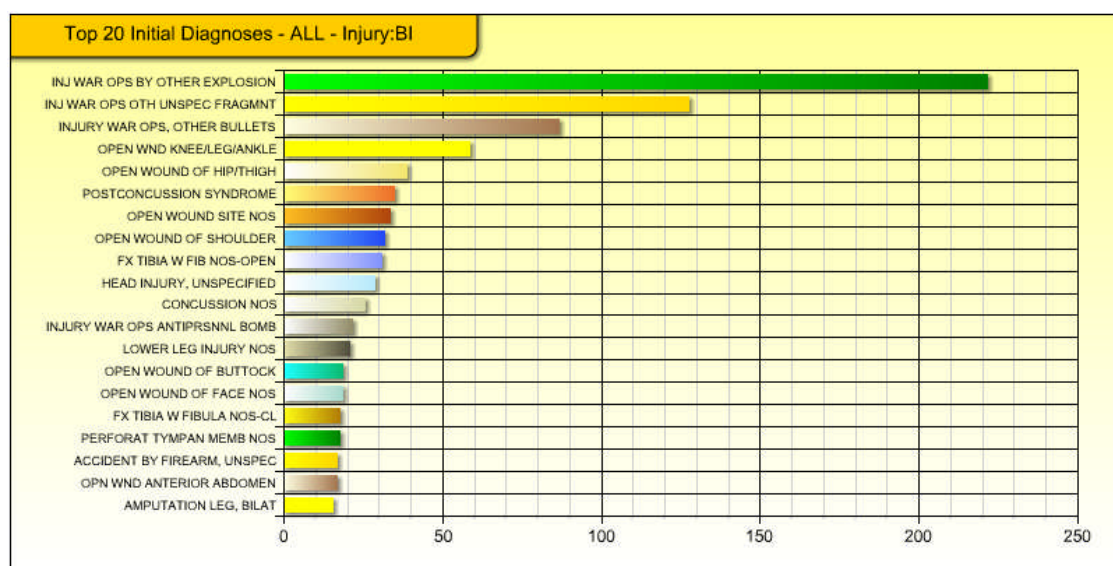
The clinical notes section created in Balad, the electronic AF Form 3899 created in Germany and the reporting capability created in Kuwait led not only to expanded use and buy in at these locations but to all locations using JPTA. Kuwait wasn't the only hospital that needed to know the top 10 diagnoses and the Air Force Theater Hospital in Balad wasn't the only hospital that needed to share clinical information or attach documents—they were just the first to express the need. Once these and other capabilities were implemented, they were used and expanded by other hospitals. Over time, with more and more user feedback, the processes were perfected and met the needs of the entire user population.

Patients Per Month
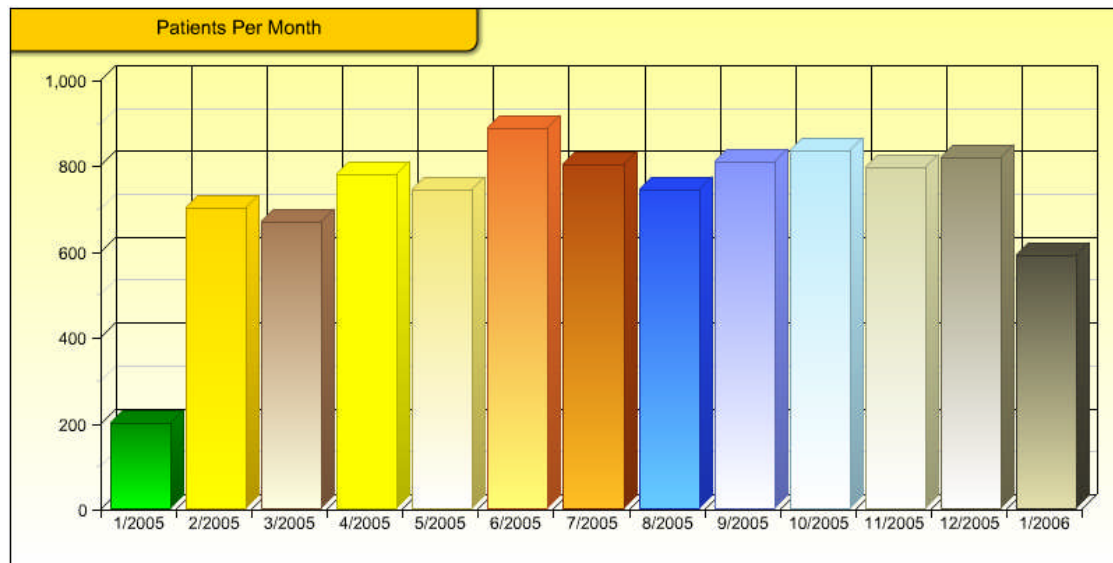
Significant development efforts up until now were focused on functionality that supported the hospital level user as well as users at the Military Health System. There was still a need, however, for a reporting capability that directly supported the war fighter, specifically the Medical Brigade deployed to Baghdad that was responsible for command and control of most hospitals in Iraq. In the summer of 2006, the 30th Medical Brigade detailed the requirements to streamline as many reports as possible using JPTA to eliminate duplicate entry, increase data accuracy and security, and to create a paperless environment. Several key reports had to be automated in order to make this work: the 24 hour report, the evacuation and transfer report, and the mechanism of injury report, (There were others but I will focus on these three because of their significance.) Similar to the process undertaken at the Navy Hospital in Kuwait, these reports would be driven by the patient registration and disposition process. This effort was considerably more complex because it involved rolling up data from all hospitals based in the Central Command Theater of Operations and required all hospitals to adopt the same policy for admitting and discharging patients.

The Mechanism of Injury report was fairly straight forward. An additional mandatory field added to the registration page for mechanism of injury and a dynamic graph associated with a few other data fields completed this requirement. This is a great example of streamlining a process. Previously, each hospital would provide a report to the medical brigade, they would consolidate it into a single spreadsheet and submit it to the next level headquarters. Prior to the JPTA version, this process was disassociated from any other data collection requirement.

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Typically, separate processes like this result in poor data quality making the reports unreliable. By integrating the mechanism of injury report into JPTA, the data accuracy level immediately increased and a time consuming requirement was eliminated. Further, once in JPTA, mechanism of injury data could be associated with other data elements, making it much more valuable. As an example, it was provided to a task force responsible for developing counter-IED measures and to military researchers working to improve body armor.

The Evacuation and Transfer report was more difficult and took a few weeks to sort out. The purpose of this report was to track not only those patients being evacuated from Iraq to Germany and the United States but also local transfers from one military hospital to another or to a local civilian facility. In addition to standard identifying demographic fields and the losing treatment facility name, the destination, method and time of transport, and patient type were also required for this report. Existing JPTA data was the driver for most of this report but added fields would need to be entered by users as patients were identified for transfer. This still amounted to a considerable time saver for both the hospitals and the medical brigade, and consolidated the data into a single source.
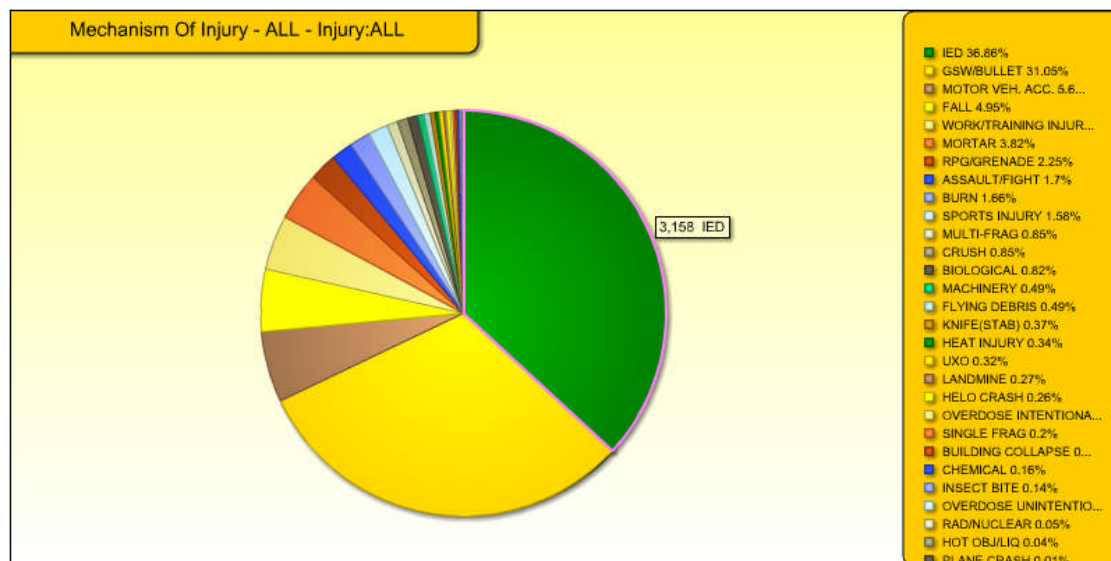
By far, the most important of these reports was the 24 Hour report. Early in the war, this was referred to as the downrange report; essentially, it was a roll up of the patient population from every hospital in the theater and Landstuhl Regional Medical Center that was emailed to a large list of recipients. Patients were listed by hospital, then name, unit, SSN, rank, initial

diagnosis and nationality (US Forces hospitals routinely treated coalition forces, detainees, contractors, host nation civilians and others). In the JPTA version, fields were added for mechanism of injury, DNBI and BI (Disease or Non Battle Injury and Battle Injury), NSI, SI, VSI (Not Seriously Ill, Seriously Ill and Very Seriously Ill), Ward, and Admission and Discharge date and time. Previously generated daily at midnight (hence the name 24 Hour report) the streamlined version in JPTA had to be dynamic, available in real time and accessible to authorized users, worldwide. Technically very difficult to complete and continuously modified over a period of 3 months, 30th Medical Brigade refined requirements and provided feedback almost daily until the 24 Hour report in JPTA delivered exactly what they needed to successfully complete their mission. Unreliable telephone communication to some hospitals was a serious problem when timely decisions on where to evacuate patients could have life or death consequences. The visibility provided by the 24 Hour report eliminated the requirement for phone coordination between the brigade headquarters and the supporting combat support hospitals enabling faster decisions on where to send seriously injured patients. Once implemented, the 24 Hour report coupled with the Evacuation and Transfer report in JPTA provided instant visibility of the patient population at all hospitals facilitating a faster response capability during mass casualty situations. The 24 Hour report in JPTA delivered unsurpassed real time visibility of the patient population in all hospitals with a level of detail that wasn't previously available in any other system or application. This achievement was one of many firsts in leveraging secure, web based technology credited to the Joint Patient Tracking Application and streamlined the most important business processes for the Medical Regulating Officer.

M/F	NATIONALITY	MECHANISM OF INJURY	DIAGNOSIS	BI vs DNBI	NSI/ SI/ VSI	WARD	ADM DTG
<td colspan="8" style="background-color:yellow">**US FORCES**</td>
M	USA		CELLULITIS AND ABSCESS OF UNSPECIFIED SITE	D	NSI	ICW	180224Feb07
M	USA	IED	OTHER, MULTIPLE AND ILL-DEFINED FRACTURES OF LOWER LIMB, CLOSED	BI	NSI	ICW	191238Feb07
M	USA	IED	BURN OF UNSPECIFIED DEGREE OF FACE AND HEAD, UNSPECIFIED SITE	BI	SI	ICU	191514Feb07
M	USA	BUILDING COLLAPSE	CLOSED FRACTURE OF UNSPECIFIED BONE(S) OF FOOT [EXCEPT TOES]	NBI	SI	ICU	200421Feb07
F	USA	GSW/BULLET	INJURY DUE TO WAR OPERATIONS BY OTHER BULLETS	BI	NSI	ICW	200645Feb07
M	USA	FALL	CLOSED FRACTURE OF SHAFT OF FIBULA WITH TIBIA	NBI	NSI	ICW	200646Feb07
M	USA	IED	OPEN WOUND OF PENIS, WITHOUT MENTION OF COMPLICATION	BI	SI	ICU	200647Feb07
M	USA	GSW/BULLET	INJURY DUE TO WAR OPERATIONS BY OTHER BULLETS	BI	NSI	ICW	200648Feb07
M	USA	GSW/BULLET	UNSPECIFIED CONDITION OF BRAIN	BI	VSI	ER/OR	201305Feb07
<td colspan="8" style="background-color:yellow">**COALITION FORCES**</td>

The Theater Trauma Director at United States Central Command found several uses for JPTA that helped facilitate better, more standardized care for trauma patients. After outlining requirements for online case reviews of the most seriously injured patients, they were quickly integrated into new JPTA functionality. Any hospital in the evacuation chain could add a patient to the case review list at any time, once on the review list, clinicians had visibility and could participate in a weekly teleconference designed to evaluate these cases. Using JPTA, all providers involved could see the entire record simultaneously allowing them to discuss both outcomes and future care.   Additionally, theater wide Clinical Practice Guidelines were shared to all hospitals using JPTA as a delivery platform.

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Case Review Conference: Patient List

SSN [＿＿＿＿＿＿] [?]   NAME [＿＿＿＿＿＿] [?]

☐ Include Inactive Patients

INJ NATURE	DIAGNOSIS	ARR. DATE	NOTE
D	APPENDICITIS, UNQUALIFIED	04/07/06	04/08/06 - AVSS; d/c
BI	INJURY DUE TO WAR OPERATIONS BY OTHER AND UNSPECIFIED FRAGMENTS	01/18/07	02/03/07 - Ortho op note: Patient was taken to the OR to remove dressings and evaluate the graft. The graft had 100% take. The patient will be discharged to home in the AM -
NBI	FRACTURE OF UNSPECIFIED PART OF UPPER END OF HUMERUS, OPEN	08/28/04	09/01/04 - Per TRAC2Es, patient A/E out on JD 245 (1 Sep 04); mil air to Darnall ACH, Ft. Hood. - PENDING RHS -
D	OTHER SPECIFIED ADJUSTMENT REACTIONS	03/25/05	04/01/05 - PT DRESSING CHANGED IN AM. SITE WELL GRANULATED AND HEALING WELL. PT PAIN WELL CONTROLLED WITH PO MEDS. PREPAREING FOR DISCHARGE ON MONDAY -
D	CHEST PAIN, UNSPECIFIED	03/31/06	03/31/06 - ADM@1215Z ATYPICAL CHEST PAIN -
D	CHEST PAIN, UNSPECIFIED	03/31/06	03/31/06 - D/C @1715Z PT WILL F/U IN AM -
BI	INJURY TO RADIAL NERVE	07/24/04	07/29/04 - Per TRAC2ES, patient A/E out on JD 210 (28 Jul 04); mil air. Destination Facility: Darnall ACH, Ft. Hood. - PENDING RHS -
D	LAPAROSCOPIC SURGICAL PROCEDURE COVERTED TO OPEN PROCEDURE	11/15/06	11/15/06 - POD #1 diagnostic laparoscopy. Probable endometriosis. D/C today. -
D	OTHER CHEST PAIN	01/28/06	01/24/06 - Designated TCC (Fairchild AFB) by cardiology DX: Pericarditis. - PENDING TRANSFER

Once the ASD (HA) signed the Nov 04 directive requiring JPTA use at all Military Health System hospitals, Walter Reed and Brooke Army Medical Centers, identified as two of the critical facilities because of the large number of patients arriving there from LRMC, were at the top of the list for fielding (5). Walter Reed, arguable the busiest Military Hospital in the United States, had previously developed a stand alone application to track patients locally known as the Global War on Terrorism Database (commonly referred to as the GWOT Database). Transitioning Walter Reed to JPTA was relatively easy. A few new fields were added to support their business process, then patients in the GWOT Database were verified demographically to eliminate duplicate records and entry errors and then integrated into JPTA. With the help of the OEF / OIF Patient Coordinator, Walter Reed was up and running in just a few days. Brooke Army Medical Center wasn't using any system to track OEF and OIF patients so the fielding was also quite simple.

Robust communications networks, relatively fast internet access, and satellite communications capability, facilitate the use of JPTA even in the most remote locations. The 212th MASH deployed to Pakistan in December 2005 following an earthquake that devastated much of the country. Within a few days of arrival, using the internet over a satellite, JPTA was online and used to document patient care for the remainder of the deployment. Patient data

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captured in the initial days of the operation was documented on a spreadsheet and imported into the JPTA database. The development of an offline version of JPTA was delivered in April 2007 mitigating the requirement for a connection to the internet.

JPTA is also of considerable use to the Department of Defense personnel community. Verification of each patient's demographic data against DOD personnel system files enables JPTA to provide administrative data to military personnel managers that helps facilitate a variety of personnel functions, most notably the identification of service members evacuated from the theater, by skill set, that need to be replaced. Data from JPTA also populates the Service's Severely Injured programs (such as the Army Wounded Warrior (AW2) program), helps establish eligibility for Combat Injury Pay (CIP) and is essential to the process of awarding Traumatic Servicemen's Group Life Insurance(TSGLI) to this Nations most deserving service members and veterans.

At a cost of under 2 million dollars to date, JPTA is one of the most efficient, inexpensive and yet far reaching technology initiatives ever undertaken by the Military Health System. Its reach extends to all hospitals on the battlefield, spans the brick and mortar facilities in Europe and the United States and even delivers clinical information to the Department of Veterans Affairs. With a results-oriented approach to delivering new capability, the JPTA team worked feverishly day and night modifying the code, testing it on the development server and then moving it into the production environment; customers were often delivered new capability the same day they requested it – previously unheard of in most Military Health System applications. JPTA was built for and by health care administrators and clinicians to support emerging needs in what is arguably the most dynamic environment ever faced by the Department of Defense. This leaves one to wonder why there has been such a significant effort to restrict its use in the Army Medical Department and at some levels in the Military Health System, specifically as a platform for sharing clinical data between the Department of Defense and Department of Veterans Affairs. Bottom up development like this delivers unmatched capability and provides the exact functionality needed by the most important people in the process – the users.

JPTA's incredible ability to be molded to the needs of the user resulted in the displacement of other DoD systems designed to capture healthcare data in a deployed environment. Wrought with problems during its initial deployment at the beginning of the Iraq War, the Composite Health Care System for Theater (CHCS IIT for outpatients and CHCS NT

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for inpatients) were packaged and sent with deploying hospitals in hopes of capturing the patient encounter electronically and transmitting it back to the states for inclusion in the permanent record. A myriad of difficulties associated with these systems resulted in limited, if any, use in most facilities for the first 2 years of the war. Both came with a heavy footprint and maintenance tail (each hospital had to build and maintain their own set of servers, a router, VSAT and other equipment), clinicians had little or no training prior to deployment, CHCS IIT and NT weren't used the same way in our brick and mortar hospitals in the states (contradictory to the Army policy of train the way you fight), and the Air Force and Navy had not bought in to these systems. This environment along with a need to share critical clinical information in real time to support the rapid movement of patients from one hospital to another positioned JPTA to quickly displace CHCS NT as the clinician's inpatient documentation platform of choice. Deployed to Iraq in March of 2005, today JPTA maintains a foothold as the sole universal source of inpatient registration and documentation at hospitals across the battlefield. The ability to change rapidly has been both good and bad. Providing meaningful new capabilities resulted in incredible user buy in. While user buy in increases the accuracy and integrity of the information entered into JPTA; it also makes it a target for designers of other more expensive systems that have continually failed to deliver. On one hand, this stimulates competition in a field were none previously existed but it also serves to divide leadership and often leads to conflicting guidance and policy, frustrating health care providers charged with the difficult task of documenting health care provided on the battlefield.

Many Service members remain on active duty while receiving care at Veterans Health Care facilities; others make their way into VA hospitals as they make the transition from active duty to veteran status. This results in the need to share electronic health information between DoD and VA hospitals to facilitate the best possible care. There is no common platform for sharing inpatient electronic health care information between the DoD and the VA as a result, electronic medical history data is not available on many of our most severely injured service members and veterans when they arrive at VA facilities. Active duty service members injured in Operations Enduring and Iraqi Freedom are frequently transferred to Veterans Health Administration treatment facilities for care and remain on Active Duty while in the VA system.

Congressional interest in data sharing between DoD and VA has peaked over the last few years resulting in increased pressure for effective interdepartmental sharing of protected health information. "That more combat-wounded are making that transition-traveling from Afghanistan and Iraq to Landstuhl, Germany to Walter Reed Army Medical Center here and then on to their local VA medical center (VAMC)-has only sharpened focus on the issue."(6)

The following excerpts are from a press release for the May 8th Congressional hearing by the House of Representatives Committee on Veterans Affairs, Subcommittee on Oversight and Investigations, on Sharing of Electronic Medical Records between Department of Defense and Department of Veterans Affairs.

> Washington, D.C. — Since 2000, the Committee on Veterans Affairs has held at least sixteen hearings in order to push the Department of Defense (DoD) and the Department of Veterans Affairs (VA) to share critical medical information on patients being seen or transferred to VA.
>
> "Our staff and members have visited many VA and DOD Medical Centers. Of particular interest are the four VA poly-trauma centers where service members sustaining severely disabling injuries are being cared for while still in service, as well as after discharge. We have frequently heard the concerns of VA doctors and medical personnel at these facilities that the information they are receiving isn't timely enough, or missing critical information needed to properly treat these severely injured and disabled service members," said subcommittee Ranking Member Ginny Brown-Waite (R-Fla.).
>
> Billions have been spent throughout the past twenty years by VA and DOD working on independently stove-piped electronic medical records systems that would provide better care to those serving on the front line of our nation's efforts for freedom. Yet, neither to date seems to work together in a coordinated effort of care.
>
> "As Yogi Berra said, "This is déjà vu all over again." For twenty plus years, VA and DOD have been less than enthusiastically addressing this problem, yet there is no solution in sight. In fact, the witnesses today could not give us any sort of a firm deadline when they expect an interoperable electronic medical records system to be up and running. This foot-dragging and bureaucratic passing of the buck is unacceptable. In the past twenty years, entire cities have been built on the sands of the Dubai peninsula; all while these two agencies spend billions of taxpayer dollars with little results to show for their efforts. This Subcommittee will not accept the same tired excuses – we expect action and results. I look forward to working with the Committee to ensure that VA and DOD

develop a system that allows the seamless transition of medical records. Our soldiers and veterans deserve nothing less," Brown-Waite said.

"The DOD has seven separate medical legacy systems, and none of them can communicate with the VA systems. Traumatic Brain Injury is the signature wound for our troops engaged in the global war on terror. Although DOD is screening returning troops for TBI and other injuries, the VA is not getting these vital records. Even though the President directed, with Executive Order 13410 in August 2006, the VA and DOD to develop a computer-based system for sharing medical records by January of 2007, the representatives of the VA and DOD at today's hearing could not provide a date for achieving this directive. DOD is studying the feasibility of a shared inpatient record and hopes to have that study done by 2008. This is tragic and scandalous; our troops deserve far better," said Congressman Cliff Stearns (R-Fla.).

"The movement of this information between the two departments is vital to the safety and well-being of our veterans and military active duty service members as they transfer between the two agencies and become as fully integrated back to civilian life as possible," Brown-Waite said.

After two decades, the goal still remains the same, that finally, there will be a system that will permit the exchange of critical medical information that is interoperable, bi-directional, and occurs in real-time.

"The care for those who serve our country does not stop at the exit door of DoD, but continues through the doors of VA, and the hand off between the two medical systems should be seamless, not a fumble. Our nation's heroes deserve no less," Brown-Waite said. (7)

The Department of Veterans Affairs moved quickly to take advantage of the Department of Defense Joint Patient Tracking Application. In January, 2007, the below letter was sent to the Assistant Secretary of Defense for Health Affairs:

DEPARTMENT OF VETERANS AFFAIRS
WASHINGTON DC 20420

JAN 2 2 2007

Dr. William J. Winkenwerder, Jr.
Assistant Secretary of Defense for Health Affairs
The Pentagon
Washington, DC 20301-1200

Dear Dr. Winkenwerder,

We are writing to keep you apprised of an ongoing collaborative effort by the Department of Veterans Affairs (VA) and the Department of Defense (DoD) regarding DoD's Joint Patient Tracking Application (JPTA). DoD recently granted VA access to JPTA, and we have determined that use of this system will allow us to enhance the delivery of VA services and benefits to those who have been seriously wounded in Operations Enduring Freedom and Iraqi Freedom.

We plan to use JPTA as the primary tool for tracking VA actions on cases involving injured servicemembers because the system helps us quickly identify and review relevant medical information for those combat-injured servicemembers needing benefit and healthcare assistance. DoD and VA are collaborating on a new module in JPTA to track requests for benefits, which will allow the Veterans Health Administration to provide more effective health care services and the Veterans Benefits Administration to process benefits claims faster for severely injured veterans. We have already allocated resources for this project.

We greatly appreciate DoD sharing this important computer application. It is extremely important to VA because we feel that DoD's continued use of JPTA and VA's continued access to JPTA data are critical to the successful transitioning of seriously wounded servicemembers. We will be working with DoD staff to develop and implement a Memorandum of Understanding among the Chief Information Officers in DoD's Military Health System and in VA's Veterans Health and Benefits Administrations so we may continue use of this application and expand upon our ability to access vital information.

Data sharing through JPTA is an excellent example of interdepartmental collaboration that improves care and services to those servicemembers and veterans who are most in need of our assistance. We appreciate your continued support.

Sincerely yours,

Daniel L. Cooper
Under Secretary for Benefits

Michael J. Kussman, MD, MS, MACP
Acting Under Secretary for Health

The Joint Patient Tracking Application (JPTA) is the only platform that exists today for transferring inpatient data from DoD Military Medical Treatment Facilities (MTFs) on the battlefield, in Europe and the US to health care providers in the VA. JPTA is interfaced with the

DoD Armed Forces Health Longitudinal Technology Application (AHLTA) (formerly CHCS) for Europe and US based MTFs and other DoD systems that collect electronic health information in use on the battlefield. The Department of Veterans Affairs previously used multiple disparate data sources to manage the population of Veterans and service members eligible for health care and benefits as a result of Operations Enduring and Iraqi Freedom. While, the most significant problem facing the VA was the lack of electronic health care data from the point of injury, the use of multiple data sources also resulted in duplication of effort, and poor data accuracy and integrity, ultimately making it difficult to keep track of our nation's most severely injured service members and veterans. A single authoritative, real time, web based application was needed to identify and ensure complete accountability of this population and provide access to health care data from DoD. From this need the Veterans Tracking Application (VTA) emerged. Similar in design and acting as a sister application to JPTA, VTA was intended to meet the critical need to track similar data fields (in terms of patient movement and notes) in addition to the myriad of other data elements that would document the service member's care and benefits as he or she transitioned to veteran status. Veterans Tracking Application provides this solution in a platform that allows the VA to track the delivery of health care services and benefits for severely injured combat and other OEF / OIF service members and veterans in support of a seamless transition process. Building off of JPTA, an already proven, secure, real time application in production at numerous DoD locations, including all OEF / OIF hospitals, the existing code was available to VA at no cost; with minimal funding the development process began in an effort to meet needs of the VA.

The Veterans Tracking Application has done for the VA what JPTA did for the Department of Defense. In just 5 months, for less than $275,000, the Veterans Tracking Application went from concept to reality and provides the VA a similarly dynamic platform to support an environment that rapidly changes to meet the needs of today's veterans. VTA creates the perfect union between the documentation of referrals for OEF and OIF veterans from DoD to the VA Hospitals, case management and movement between facilities needed by the Veterans Health Administration (VHA) and the complete history of the claims and benefits process that is essential to the Veterans Benefits Administration (VBA). Complemented by the invaluable Department of Defense (DoD) treatment history that the data feed from JPTA provides, VTA has become the comprehensive data source that is essential to the tracking and management of

service members. Additionally, VTA supports a call center for the severely injured and an outreach initiative for service members undergoing the DoD Physical Evaluation Board (PEB) process. It's important to highlight the functionality of the Veterans Tracking Application to provide an understanding of its capability and, in contrast to similar DoD development efforts, demonstrate what is possible using the rapid application development (RAD) methodology driven by user requirements to provide the customer with an acceptable product far more quickly than with traditional software development methods (8).

Similar to JPTA, VTA utilizes the personnel files that are provided from each of the branches of service in the registration process. Once the service member is registered, his individual data is maintained and provided to any office (health or benefits related) that makes an update regarding his care or benefits. By simply entering the service member's Social Security Number (SSN) or name, the personnel record is easily retrieved and populates the registration page. All demographic data fields are populated, to include first and last name, SSN, gender and date of birth. VTA accesses the service member's current Defense Enrollment Eligibility Reporting System (DEERS) record to retrieve the most updated address and phone information,

providing essential contact information for VA staff. Additionally, the DEERS record returns current death status. This data gathering design saves time and ensures accuracy and integrity. During the registration process, the service member may be identified as severely injured, including him/her in a special population eligible for advanced benefits. All service members are assigned at least one but up to eight ill/injured categories to include the most common severely injured categories – Spinal Cord Injury, Traumatic Brain Injury, Amputation, Visual Impairment, Burns and Post Traumatic Stress Disorder – as well as 20 other less specific categories. The registration process is the first step in building a complete service member record in VTA. The VHA and VBA staff will expand on this building block with subsequent entries.

A VHA Liaison assigned to one of several DoD hospitals begins to case manage the service member long before he or she has left the DoD Military Treatment Facility (MTF). In place within the major MTFs, the VHA Liaison follows the ongoing care of the patient, assists as needed in facilitating VA services, and plans and coordinates the movement of the service member to a VA Health Facility. In addition to managing the actual physical movement of the patient (arranging medical evacuation services, for instance, as needed) the VHA liaison maintains contact with the case management staff at the VA health facility to ensure a seamless transition of care between the MTF and VA facility. This critical information is now captured in VTA and the risk of "losing" a service member in the process of movement between the two health care systems is significantly diminished.

The following essential data fields are now captured by the VHA Liaison in VTA:

- **Referral Date** – The date that the patient was referred by the MTF to the VHA liaison for assistance.
- **VHA Liaison Name**
- **Initial Visit Date** – The initial visit date to the service member (while still receiving care at the MTF)
- **VHA Facility** – Planned facility where the service member will be sent for the next phase of care
- **Projected Transfer Date** – Planned transfer date to the VHA facility
- **Actual Transfer Date** – Actual transfer date to the VHA facility
- **Documentation of communication with VHA** – The documentation of confirmed contact with VHA receiving staff and comments related to planned movement.

When the projected transfer date is identified and entered for a patient record, VTA automatically sends an email to the Facility POC at the receiving VHA facility as well as to all case managers on-site. This is an essential step in notifying the support staff at the receiving location of the expected service member and allows the case manager to contact the individual, often before he/she has even arrived. This contact provides a comfort to the service member and to his or her family that would not be possible without the essential data flow between the parties at all facilities.

Servicemember List

Actual Transfer Date Between

Name: test patient   SSN: Start: End: January   2005   View
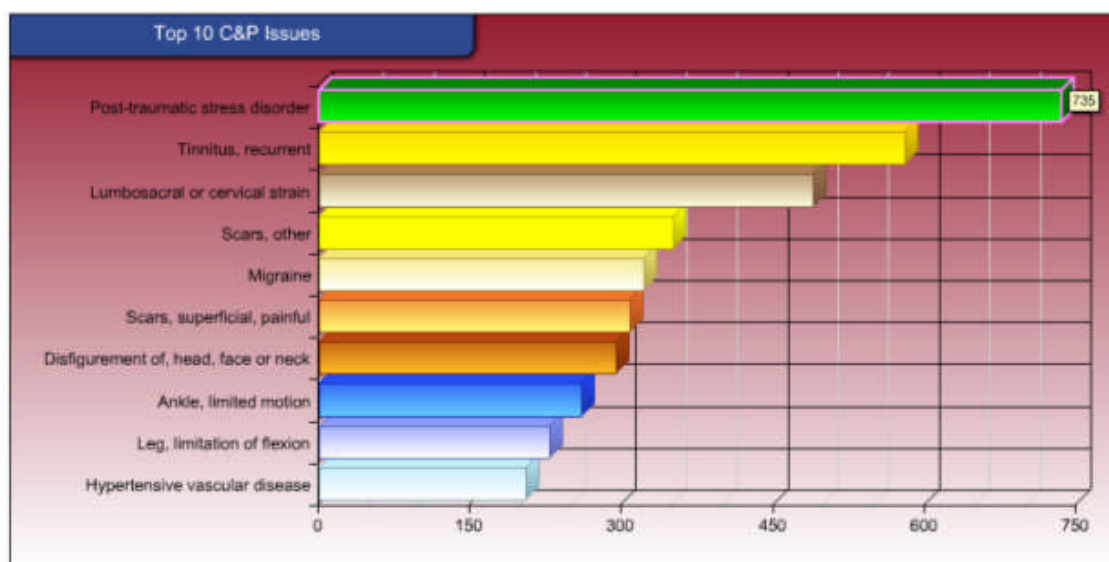
☑ Severely Injured Only

RecordCount: 1068

Name	SSN	Service Member Data	VHA	Case Manager	Case VBA	Date VAMC Notfied	Projected Transfer Date	Actual Transfer Date	Case Manager Assigned ▼	Service Member Contacted	Patient History	Severely Injured	Referral Status
		Select	Select	Select	Select				6/2/2007	2/21/2007	View	Yes	
		Select	Select	Select	Select		5/31/2007	5/31/2007	6/1/2007	5/31/2007	View	Yes	In Process
		Select	Select	Select	Select		7/2/2007		6/1/2007	6/1/2007	View	Yes	In Process
		Select	Select	Select	Select		7/10/2007		6/1/2007		View	Yes	In Process
		Select	Select	Select	Select				5/31/2007	3/7/2007	View	Yes	
		Select	Select	Select	Select		5/31/2007	5/31/2007	5/31/2007	5/31/2007	View	Yes	Closed
		Select	Select	Select	Select		6/7/2007	6/7/2007	5/31/2007	5/30/2007	View	Yes	Closed
		Select	Select	Select	Select				5/31/2007	3/28/2007	View	Yes	
		Select	Select	Select	Select		6/1/2007		5/31/2007	5/31/2007	View	Yes	In Process

Once the receiving facility has been notified of the planned arrival of the service member, the VA Facility POC will assign a case manager to the service member's case. The name of the case manager as well as the date assigned is recorded. Using VTA, the case manager can now document all contact with the service member, to include the date, method and summary of contact. Documentation begins with the initial contact (as noted before, frequently made before the service member has arrived at the VA Facility) and continues with contact entries made quarterly for up to 2 years. The author and date of entry are recorded for each and every contact record saved. If the case manager changes during this period, or if the patient transfers to a new facility, the name of the author and the date of entry will be displayed for each contact record, providing essential accounting of the service member case management.

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The VBA liaison utilizes the dedicated VBA Liaison page to document all major benefits claims and awards for each service member. As a result of the consolidated health and benefits data design of VTA, a significant advantage of using VTA is that VBA staff members now have access to essential information regarding the injury and care of the service member, facilitating more informed decisions regarding the award of benefits to the veteran. Frequently, a service member will begin a request for benefits while still being treated at a DoD MTF. Movement to a VA facility may mean the benefits request will be handled by a separate regional office. As the service member returns home, it is very likely that the responsibility to administer benefits will again be transferred to yet another office. VBA representatives can now see the complete benefits history for the service member regardless of the participating benefits office.

The service member's benefits record displays the current VBA representative assigned to the case as well as contact information for this individual. Additionally, information regarding the initial contact between the VBA liaison and the service member is recorded. The remainder of the VBA page is dedicated to recording the types, dates and notes related to claims. Up to twelve Compensation and Pension (C&P) issues can be assigned for each service member with the date the C&P claim was received and awarded updated as needed.

In an effort to best identify the Severely Injured population and focus VA services on those truly in most need, the VTA Severely Injured report was created. A list of severely wounded service members was obtained from each of the services, imported into VTA, and are

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displayed into a consolidated roster for review by VA Central Office staff. Each service member record is displayed with a link to the JPTA record (if available from the sharing agreement with DoD). The JPTA record provides a complete history of movement between all treating facilities starting with the first point of care in theater, through transfer to Landstuhl Regional Medical Center, subsequent treatment at CONUS facilities and into the VA system of health care. The JPTA record provides dates of movement as well as patient treatment notes from doctors, nurses and case managers at the treating facilities. Additionally, the JPTA record consolidates the CHCS data from both theater and fixed facility sources and often contains diagnosis, treatment and medication histories. This history is invaluable to the VA staff member and facilitates the accurate identification of the VA Severely Injured population. In addition to the JPTA record, the Severely Injured report provides a link to current Compensation and Pension information, as well as the TSGLI claim history. After careful review, the VA staff member can approve or remove an individual from the Severely Injured report list and can assign SI categories to the patient record to better identify the nature of injuries. The Severely Injured report is an excellent example of the value of collaboration between the DoD and the VA. Without the shared patient history, evaluation of these service members would be impossible.

Severely Injured Approved List

Total=2055

COMPO	DIAGNOSIS	RELATED INFO.	SOURCE	JPTA RECORD	CP CODES	CHCS INFO.	CALL STATUS	PRIMARY S.I. CAT.
R/USA	BURN NOS		VA Record	View Record		View	Got Answer Machine	BURNS-MAJOR
AD/USA	BURN NOS	AMPUTATION	AW2	View Record		View	Got Answer Machine	AMPUTEE-MAJOR
AD/USA	BURN NOS		VA Record	View Record	View	View	No Number	BURNS-MINOR
AD/MARINE	BURN NOS	Disfigurement of, head, face or neck, Scars, deep, other than head, face or neck,	Marines	View Record		View	Successful Call	BURNS-MAJOR
AD/MARINE	BURN NOS	Scars, superficial, painful Disfigurement of, head, face or neck	Marines	View Record		View	Successful Call	BURNS-MAJOR
AD/USA	BURN NOS	BURNS	AW2	View Record		View	Got Answer Machine	BURNS-MAJOR
AD/MARINE	BURN NOS		VA Record	View Record		View	Successful Call	BURNS-MINOR
AD/USA	BURN NOS	BURNS	AW2	View Record		View	Successful Call	BURNS-MAJOR
AD/USA	BURN NOS	BURNS	AW2	View Record		View	No Answer	BURNS-MAJOR
R/MARINE	BURN NOS		VA Record	View Record		View	Got Answer Machine	BURNS-MAJOR
NG/USA	BURN NOS	BURNS	AW2	View Record		View	Successful Call	BURNS-MINOR
AD/USA	BURN NOS	BURNS	AW2	View Record		View		BURNS-MAJOR

An example of the flexibility and responsiveness of VTA is its support of an outreach call center for the severely injured. The Poly Trauma Call Center in Dayton, Ohio was tasked with the responsibility of making follow up calls to all severely injured service members. Using a dedicated page in VTA, the call center staff was able to document every call and link each call record to the service member's VTA record for future review. Using a scripted list of questions, the call center staff interviewed service members and/or family or caregivers (as appropriate). The responses were carefully recorded into the VTA follow up call center page. A VTA report on the calls facilitates querying for particular interview responses and identification of service members who require a follow up calls or further outreach from the VA Health or Benefits staff.

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Call Center Follow Up Call Report

Total calls: 2702
Total Successful Calls: 807
Total Veterans Called: 1951
Total Deceased: 4
Total Want CM Call: 21

Need Assistance	Total Calls
OTHER	77
BOTH MEDICAL AND BENEFITS	73
BENEFITS	60
MEDICAL	36

| Call Status	Total Calls	Total Unique Veterans
Got Answer Machine	1121	900
Successful Call	807	703
No Number	452	393
No Answer	259	245
Call Back Appointment	59	57
Wrong Number	4	4

View Call Totals by Provider
View Call Totals by Veteran State

The DOD currently shares with VA a list of service members who are undergoing the Physical Evaluation Board process. As they become eligible for VA health care and benefits, the VA is interested in identifying these individuals and contacting them with information and outreach services. This list has been imported into VTA and can now be viewed by both the VHA and VBA offices. This list is being used to contact service members and is supported by dynamic reports to monitor and help manage the outreach effort.

28
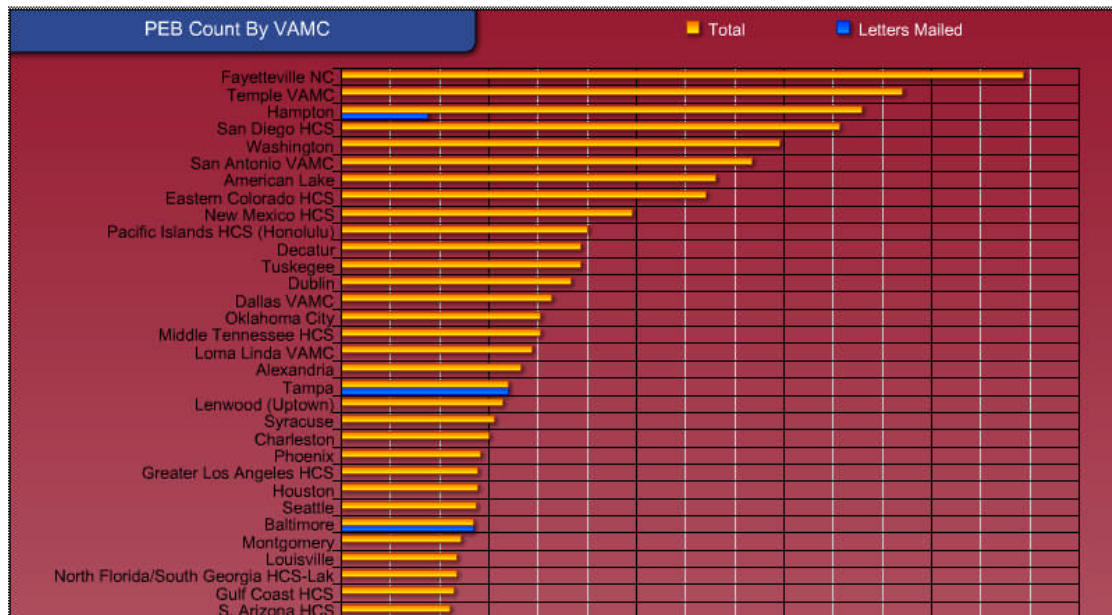
Graphical reports

VTA delivers a powerful reporting capability similar to that of JPTA. Focused on providing meaningful, real time data to VA users at all levels, reports have been designed to enable tiered visibility of information starting at the Department of Veterans Affairs Central Office level and drilling down thru VHA facility or VBA Regional Office to the individual veteran. Some examples of VTA graphical reports are listed below:

Chart titled, Top 25 Beneficiaries by VARO
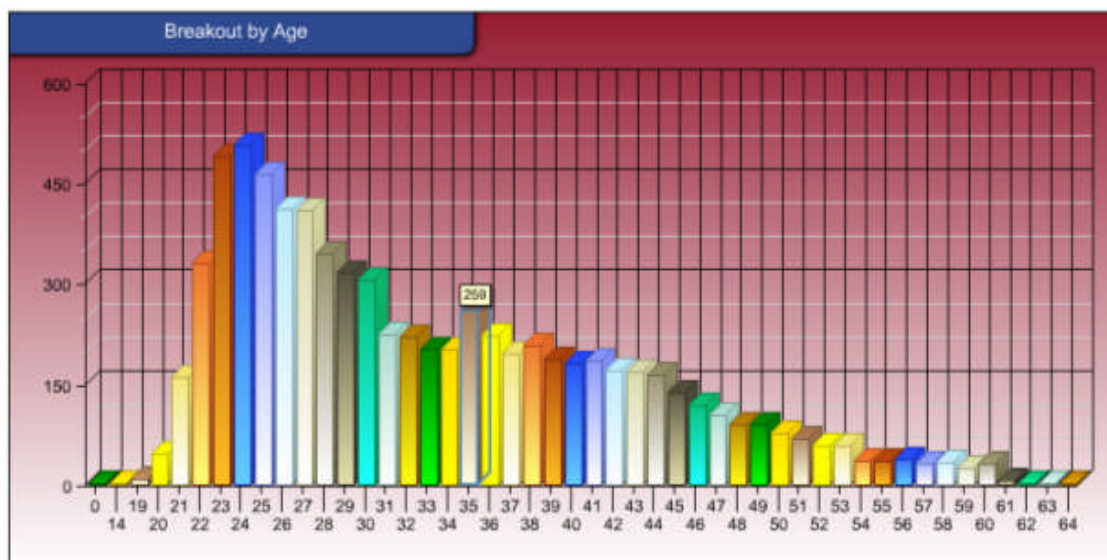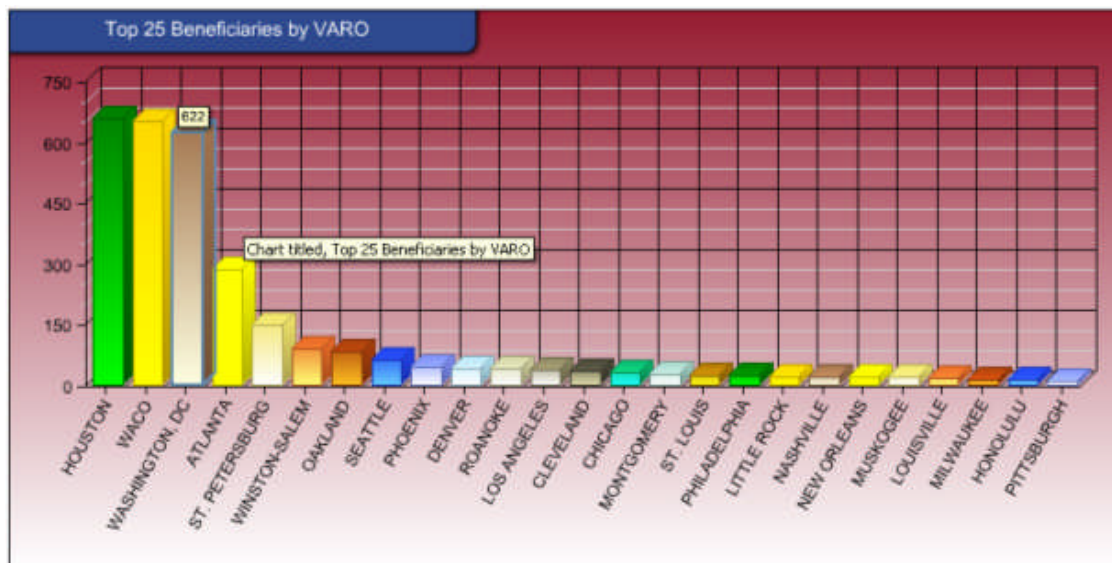
During a period of time in the United States that has seen vast numbers of service members injured, many that would not have survived their injuries in previous wars and will require extensive, long-term rehabilitative care, and many more that will be eligible for benefits, complete sharing between the departments is fundamentally important. JPTA / VTA implementation at Veterans Affairs is vital to the mission of identifying and tracking this population and is already filling the gap for exchange of clinical and administrative information between the DoD and VA.

The optimal strategy for expansion of data sharing between DoD and VA is thru expansion of the JPTA / VTA platform. Extending the reach of JPTA to capture all data of interest to the VA from every DoD health care information system as well as modifying JPTA to provide additional functionality for DoD users could quickly fill the large gap that results from the DoDs lack of an electronic inpatient medical record. Similarly, integration of VTA with the VA's Computer Patient Record System (CPRS) would provide seamless access to data that exists in JPTA / VTA to VA users that need it the most. In addition to sharing treatment data with the VA, DoD could maintain real time visibility of active duty service members while they are recovering or being treated in Veterans Affairs Hospitals. VTA should also be expanded to capture data from other relevant VA data sources in both the VHA and VBA. The Joint Patient Tracking Application and Veterans Tracking Application platforms are poised to deliver what the DoD and VA have been unable to complete for over 15 years, an expansion of these

programs represents the best way ahead for both departments in developing a single, shared platform for information exchange.

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